### New Features

1. **Excel Bias/Interaction Plots:**
   - Absolute measures (baseline + bias/interaction)
   - Relative bias measures (bias only relative to overall)
   - Relative bias t-value (significance relative to overall)
   - Pairwise measure bias differences and significances
   - Average observed rating

2. **Output score files to SPSS and to Excel**

3. **Output residual files to Excel and SPSS**

4. **Faster analysis** (disk input-output and screen writes)

5. **Control buttons** in Facets main Window:
   - “Pause/Resume” and “Finish iterating” buttons

6. **Bigger datasets:** Facets has successfully analyzed datasets with 500,000 elements and 100,000,000 data points

### Specification Statement Enhancements

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>7.</td>
<td><strong>Barcharts</strong>= no, most important, all</td>
<td>Barcharts = No, Yes, All</td>
</tr>
<tr>
<td>8.</td>
<td><strong>Labels</strong>= Explicit dummy facet code, “D”</td>
<td>Anchors all the starting values at 0</td>
</tr>
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</table>
9. Models = ?,?,?,?,R8K
   Models specification: Addition of “K” to indicate that
   intermediate unobserved categories are to be kept in the
   category hierarchy

10. Tables =: Suppress Table Output from the main analysis
    - use the pull-down menus instead

11. T4max =: Specify maximum number of residuals to be
    reported in Table 4.

12. Vertical = SL displays the category labels in Table 6
    Vertical = 1C displays a count of the element numbers in
    Table 6

13. Yardstick =: location of extreme elements (at end or by
    measure), end is the default

Operational Enhancements

14. Edit initial settings:
    Option for computation of empirical curves.
    Computation can take a long time if dataset is large.
    Option for displaying iteration bars. Iterations can slow
    down some Unicode versions of Windows.

15. Short-cut keys: revised model-checking short-cut keys
    to remove conflicts with Windows defaults
<p>| | |</p>
<table>
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<tbody>
<tr>
<td>16. <strong>Short-cut keys:</strong> All short-cut keys documented</td>
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<td></td>
<td>Insert    Overwrite</td>
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<td></td>
<td>Ctrl+A, Ctrl+Clear, Ctrl+Number Pad 5   Select all</td>
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<td>Ctrl+C, Ctrl+Insert   Copy</td>
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<td>Ctrl+V, Shift+Insert   Paste</td>
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<td></td>
<td>etc.</td>
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<td>17. <strong>Font menu</strong> - to simplify changing display fonts in Facets Window</td>
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<td>18. <strong>Edit Template</strong> from Edit menu streamlined</td>
<td></td>
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<tr>
<td>19. <strong>Cancel button</strong> merely exits from current dialog box.  Facets remains active.</td>
<td></td>
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<tr>
<td>20. <strong>Files menu:</strong> More options on program launch</td>
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<tr>
<td>21. <strong>Iteration progress bar:</strong> shown in color.  Multiple ===== are written in one operation to prevent writing to the screen slowing down the computation.</td>
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<tr>
<td>22. <strong>Facets Window:</strong> Red for warning messages</td>
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</table>
23. **Facets Window**: only most unconverged elements shown to speed up screen display output.
- Largest score residual
- Largest score residual percent
- Largest logit change

24. **Bias/Interaction dialog box**: Better control over bias/interaction Tables and Excel plots from Output Tables menu

25. **Modify specifications dialog box**: Change facet positive and negative orientation (Positive=, Negative=)

- Change standard error reported, model or real (SE=)

- Bug fix: Umean= and Uscale= malfunction.

  Now accessed from all Table dialog boxes

26. **Table 14**: more than 1000 pairwise comparisons. Please request explicitly from the Output Tables menu due to memory and speed constraints.

### Reporting and Display Enhancements

27. **Table 2**: Unobserved models not reported

28. **Table 2**: Rating scales listed in order
<table>
<thead>
<tr>
<th></th>
<th>Cat</th>
<th>Step</th>
<th>Exp. Resd</th>
<th>StRes</th>
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<tbody>
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<td>1.8</td>
<td>2.2</td>
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<td>1 Vin</td>
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<tr>
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<td>4.8</td>
<td>-3.6</td>
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<td>5 Harr</td>
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<tr>
<td>2</td>
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<td>-2.9</td>
<td>6 Ralp</td>
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**Table 4.** Standardized Residual: 1 decimal place

**Table 6:**

Vertical= **SL** displays the category labels

Vertical= **1C** displays a count of the element numbers

**Table 6:** Non-extreme categories shown next to extreme categories

**Table 6:** Rating scale identification below rulers

**Table 6:** Fewer overflow lines

**Table 6.0.0:** Improved subset reporting

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**S.1:** Model = ?B, ?B, ?, CHOPS

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35. **Table 6.1:** Rescaling of numerical bar charts for consistency across facets

![Rescaling of numerical bar charts](image)

36. Table 13: Bias/interaction direction reported explicitly

(higher score = higher bias measure)

37. Table 13: Facets names in bias/interaction report

38. Table 14: Heading shortened:

*was:* Bias/Interaction analysis specified by: 1. Tree, 2. Bark

*now:* Bias/Interaction: 1. Tree, 2. Bark

39. Graph file: headings and range

40. **Typographical error** “xstop” to “stop”

There are potentially 123 pairwise terms. Press Ctrl+F to xstop reporting.

41. **Bias sign inconsistencies:**

always: positive / negative resolved: Bias= only for Tables 12 and 13.

42. **PROX estimation:** Don’t estimate the rating-scale structure during PROX: it proved detrimental

43. **Data file message:** Corrected instructional message:

Data file not found - please re-enter

44. **Stop statement:** Unexpected, very rare, program stop removed. Now Facets always exits gracefully.

45. **Undefined facet:** Table 7 on the Output Tables menu no longer crashes if there is an undefined facet.

46. **Real standard error:** Documentation corrected for the Real S.E.

Real S.E. = Model S.E. * sqrt(Max(INFIT Mnsq, 1))

47. **Subset detection:** further unusual designs correctly diagnosed

Subset connection O.K.